

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: mshaum@cencom.net
Subject: 32S1 CW ops
Message-ID: <M.040496.163521.69@versa>

Steve Ellington commented to Cal re: 32S1 on CW:

> > I would highly recommend this transmitter provided of course that it is
> > clean. It was a very good CW transmitter. There were many differences

>I must take exception with this statement. The S1 used an audio tone to
>produce cw through the sideband circuitry. It was so baaaaad that the FCC
>even took action against Collins. This was fixed in the later versions.
>It still is worth that price though.

I seem to recall the easy fix was to up the frequency of the audio
tone/sidetone to something around 1600 hz or thereabouts. Perhaps the KWM-1
has the same symptoms. A slight readjustment of the carrier osc and you
wouldn't have the leaking carrier keyed with the vox relays as you whistled
your CW via hand key through the audio channels..

Note that the 32S3 was a complete redesign of the CW generation method, with
appropriate rf carriers being used, grid block keyed, adjustable waveshaped and
even a front panel spotting button implemented. Save for the inclusion of a
offset carrier crystal for CW transceive operation (like my trusty green Heath
SB series used/uses) I always thought the 'S3 was one of the better CW exciters
around. I had the good luck to use one frequently back in the college days at
the W8UM club setup.

Mark Shaum, NE9G
mshaum@ns.cencom.net

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Michael.J.Knudsen@att.com
Subject: Re: 32S1 CW ops
Message-ID: <9604042323.AA05967@bock.ih.att.com>

I understand that the KWM-2 still uses the "key the CPO into the mike"
technique for CW, and doesn't sound too hot on the air.
I haven't tried mine yet, as my ant doesn't load for squat down on 3580

and the rx preselector regenerates like crazy below 75m (but is fine on higher freqs, go figure).

But I might try the color TV QRG BA net, even to not using a TV rock in the VIKing II like a real BA-ite. 73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Michael.J.Knudsen@att.com
Subject: Re: 5U4 vs 5R4R(was Heathkit knob and a question)
Message-ID: <9604041743.AA05870@bock.ih.att.com>

Brings up a question: When I got my HQ-180C it had a 5R4 in the 5U4 socket. The 5R4 is an industrial type with higher voltage ratings, lower filament current, but lower current capacity than the 5U4.

It works fine in the HQ-180, and the B+ voltages are down where they should be, even tho my AC line has measured as high as 127 VAC!

I tried subbing the "correct" 5U4, and found I had some gassy or otherwise bad (shorted?) 5U4s in my box. They shot purple sparks internally and/or blew the 180's line fuse. One worked fine when I slowly brought up the power on a Variac. But I decided against using my new 180 as a tube tester any more.

BTW a 5U4 gave even lower B+ voltages in the rx. I figure it's weak.

Anyway, the 5R4 seems to work fine in the 180 and it saves some filament amps (2 steda 3), so I think I'll leave it in the Hammer, at least until I get some piece tha really needs a 5R4 (like another CV-157?!?).

Didn't the DX-40 and 60 use a 5AR4? I remember mine always flashed a little purple around the filaments when first turned on. But it never failed.
73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: List Admin/Owner BoatAnchor Mail List <listown@jackatak.theporch.com>
Subject: ADMINISTRIVIA: *PLEASE* take it easy...
Message-ID: <9604032251.aa24137@jackatak.theporch.com>

Gang-

I am tired... and behind on my reading of the list...

There have been lots of errors to cope with, lots of people whose mailers are broken or who need some special help and attention....

..

and my day job took a sudden turn toward more hectic.

That said, I would like to plead for some sanity. One person has expressed his frustration at having several people ask that he not wholesale include previous messages. Another jumped to his defense.

Things are a little different now that we are on a subscription basis. *NO* subscriber signed up for off-topic discussions. List policies are simply NOT subjects for list discussions, and neither *ANY* forms of flaming, criticism, or the like.

You may take these up with me, at this address
(listown@jackatak.theporch.com)

or you may grumble into your coffee cup, but these are NOT subjects for list discussion. We are here for boatanchors, for the fellowship, and the information and enjoyment, and not for way off-topic threads.

I believe the over-inclusion was a mistake, *BUT* in the past few days, there *HAS* been a disturbing trend toward over-including text from previous posts on the part of several folks.

Let us get away from the bandwidth argument, and address what it really is: people are offended that someone else thinks so little of other people's time that they just dump in a whole message without editing. It is intellectually lazy... remember Blaise Pascal's famous: "Please forgive me for writing such a long letter, but I did not have the time to write a short one."

So, let's get back to boatanchors and the life and times, and be as considerate of each other as we can.

Thanks.

--

73

Jack, W4PPT/Mobile (75M SSB 2-letter WAS #1657/#1789 -- both all mobile! ;^)

- - - BoatAnchor Mailing List Archiver/Owner - - -

listown@jackatak.theporch.com ---- firebotl@jackatak.theporch.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996

From: "Barry L. Ornitz" <u856010@eastman.com>

Subject: Antenna Tuners, Ladder Line, and Boatanchors

Message-ID: <Pine.ULT.3.91.960404200042.8916D-1000000@dua150.kpt.emn.com>

Mike, AA9RG <Michael.J.Knudsen@att.com> wrote:

> [Sorry to continue the antenna-feed thread on BA, but Barry's
> mail site is screwing up and bouncing his mail. Eastman.com's gateway is

> translating "ornitz" into "u86xxxxx" and then a later stage can't
> recognize it. Anyway, the topic of wire antennas for good old BA
> rigs should stand one more go-round.]
>
> Hi Barry -- you asked for it, some discussion of antennas.

Always mail me at <ornitz@eastman.com> which I always include in my signature. Others here should consider always doing the same since many mailers clip off portions of the headers. In my case, the listproc running boatanchors clips off the "Reply To: ornitz@eastman.com" line.

I would rather not get into the subject of antennas here on boatanchors unless Jack specifically gives his blessing. If you think I am long-winded now, I can REALLY get into antenna discussions... I do want to make a few quick points, however, for their educational value to the group. [What? Brief? Never!]

> Right now I am debating whether to spend some money on a "Fritzel"
> asymmetric dipole (one side as if 80m, the other 40m) which includes
> a coax-fed balun; or to just put up an honest 80m dipole, and hook up a way
> to drive both sides in phase for 160m.

Think about this. A balun is to convert single-ended transmission line to a balanced load. This antenna CANNOT be a balanced antenna with off-center feed. So what does the balun actually do? I suspect it just basically does some impedance matching.

Likewise someone earlier mentioned a homebrew current balun with coaxial input and output. I think I remember him stating it was in a metal box. OK. So what does this do? It might transform impedances but it does nothing to prevent current from flowing down the outside of the coax. Any such unbalanced current will travel down the outside of coax shield, over the surface of the metal box, and on to the surface of the other coax.

Balun operation, and what they can and cannot do, is explained well in Maxwell's and Sevick's books (I think the titles are "Reflections" and "Baluns" respectively). Both are ARRL books.

> An honest dipole would let me use ladder line. My little tuner does have
> balanced outputs (but just as you said, it is a hi-pass filter -- my first
> reaction on seeing its schematic was "DUH?"). What ever happened to
> pi-networks -- nice and low-pass, and should match anything.

The Pi-network was developed for military aircraft use, I believe, since the loads were generally low-impedance, end-fed, trailing wires. It is a great network for unbalanced loads and unbalanced sources. The T-network can often cover a somewhat wider range of impedance ratios with typical component values. Either network can be high-pass or low-pass. Link

coupling tends to be band-pass (but harmonics can couple capacitively into the link, leading to the use of shielded links found in older ARRL handbooks).

The point I should have made the other day about tuners with built-in baluns is this. A balun is designed to handle a given source and load impedance for widest bandwidth. Transmission line type baluns, in fact, utilize a variation on the 1/4-wave impedance transforming characteristics of a transmission line. Once again, see the books I mentioned for details.

The load presented by a random length dipole fed with ladder line can range anywhere from a very low impedance to a very high impedance depending on the antenna length, feedline length, and frequency. Tuners like the venerable Johnson Matchbox handle this with aplomb. Unbalanced tuners feeding a balun generally expect the load impedance presented to the balun to be near 300 ohms (with 2:1 VSWR, 150 to 600 ohms with lots of reactance in between). Outside of this range, the balun may saturate or spark-over at higher powers. The unbalanced tuner may transform the resultant load into something reasonable but if your balun gets hot in operation, you are losing power by turning it into heat.

For those into home construction, a balanced antenna tuner may be nothing more than a large coil tuned with a split stator capacitor (or two ganged capacitors, or even one if you insulate the shaft well). Use a several turn link for the transmitter to feed, and use clips to attach the feedline to the coil. Place the clips equal number of turns away from the coil center and vary the tap and capacitor tuning for lowest VSWR.

Now this may be difficult to tune at first. It WILL be time consuming to determine the best coil tap locations. But for a given antenna, write down the best positions as a function of frequency. Keep the table handy so when you switch bands, all you have to do is pick the closest settings from your list. Touch up the capacitor setting slightly and off you go.

You will likely find you need a different coil for 160 meters, 80/40/31 meters, and a third for 20 through 10 meters for your particular capacitor. If you want to get fancy, solder your taps in place and use a switch to change bands. In any event, you will be discovering a fun activity many old timers did often. Just watch out to not try adjusting the taps while the transmitter is energized (been there, done that, still have a scar!). RF causes rather nasty burns but I have never met a single OT who did not get one at some point in his career. Of course the smart ones only got ONE!

If Mike or others want to get into antennas, please email me directly. Not everyone loves to tinker with them like I do and we do not need to tie up this list. Ladder-line, tuners, link coupling, etc. are all part of

our heritage so I hope this post is not too far out of line.

I have given talks on Smith Charts and such before but this must be done in person, preferably after I am well attitude-adjusted with a cold 807, and where I can wave my arms a lot! ;-) Just ask Jack.

73 and thanks for indulging me,
Barry L. Ornitz WA4VZQ ornitz@eastman.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: dlightfoot@prodigy.com (MR CHARLES L LIGHTFOOT)
Subject: Re: ARC-5 SSB
Message-ID: <097.05125206.XLKW26A@prodigy.com>

-- [From: Charles L Lightfoot * EMC.Ver #2.10P] --

The cheap and easy SSB that Vitale designed and wrote up provides the fondest memory of my start in this hobby.. I built two of them in the early 60's. The first one I built by myself at age 13 and it never really worked as I didn't have the slightest concept of lead dress. I worked Bell Lab employees commuting through New Providence using my DX-20 and a grid modulator on 10 meters, and mentioned my problem. Within a week, I had four Bell Lab employees who would periodically stop by my house and give me pointers and explain the the theory and practice of homebrewing. Thus at age 14 I ended up with a great little 20 meter rig that I used with my HQ129X to work the world.

After I left for school years later, my family moved from that house and the rig was lost. Even though it is gone, that rig continues to remind me of what we owe to the youngsters coming up in the hobby or into the industry.

73, Deke

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Michael.J.Knudsen@att.com
Subject: Re: ARC-5 SSB
Message-ID: <9604032049.AA05609@bock.ih.att.com>

That audio phase shift netowrk would be great for building an SSB rcv adapter too. If ya got any, some of us will be wanting them, maybe.

DSB apparently drove some hams to use 11-meter style language.

If you don't narrow your rcvr's passband and set the BFO off to one side, the two sidebands beat against each other and the audio cuts in and out. You really have to filter out one of the other side.

Easy enough to do with any RX with a 2 or 3 KC BW, let alone a more modern selectable-sideband set, but as Mac said, not everyone figured it out.

Pop 'Tronics had a homebrew DSB 25 W exciter (no ARC's were sacrificed to make this movie), and I used to hear hams advising newcomers not to bother with it. Don't remember whether the balanced modulation was done in the finals or at low-level ahead of them. If the latter, a few (?) dollars sent to Cedar Rapids could convert it to genuine SSB. 73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: d-hlinsky@nwu.edu (Don Hlinsky)
Subject: Asymmetrical AM Modulation
Message-ID: <199604041515.AA007220902@casbah.acns.nwu.edu>

Michael.J.Knudsen wrote:

>Is asymmetrical modulation on BC stations the reason why some
>announcers have that gravelly, gritty sound normally associated
>with sandy-state portables, even on a good tube set?

Asymmetrical modulation (i.e. positive peaks > 100%) does not necessarily cause this "gritty" sound. If the transmitter is *capable* of > 100% positive, the sound can be nice and clean. Now for the gotchas!

Transmitters built before about 1975/76 or so did not have the capability for > 100% modulation. Many of these were modified to allow 125% peaks when the FCC granted that capability. Unfortunately most, when modified, didn't really do 125%. Instead they struggled to make 110% (inadequate power supplies) and then rounded off the modulation peaks. That rounding causes distortion or the gritty sound.

Second cause, and the most likely: Most AM stations use VERY large amounts of peak limiting to force their average modulation up. The effect is similar to cranking up the voice processor on your SSB rig. If overdone, which is often the case in broadcast, the modulation envelope flattens on peaks. Again, this creates distortion.

Modern audio processors do a far better job of not distorting the waveform but there is no magic way to get high average modulation without adding some distortion. AM can sound really good if not overprocessed.

Want to experiment? Try playing with the audio processor setting on your SSB rig. Get someone to critique your audio and average signal level as you crank the processor level up and down. You can do the same thing with some of the older AM rigs by cranking up the mic gain and overdriving the audio amp. Don't do this into the antenna though, it might cause splattering if you manage to drive the RF stages into a non-linear region.

73,

Don - N9IZU
d-hlinsky@nwu.edu (Don Hlinsky)

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: BA/GB Fist Function Report
Message-ID: <9604041645.AA104299@csemail.cropsci.ncsu.edu>

Well, last night was a Happy HeathKit night, it seems..... more duelling HotWater 16's than have been 'eard in many a moon. Great going fellers! This weekend ought to be quite good. Soo..... grapples ye up yer tin cans atop yer noggins, an areadys yer keys at the fore.... cuz de BA/GB Fist Function is a fine place to rattle an' bang on the ol' brass monkey!

QRG 7025+ahair QTR 0100/0200Z

QRG 3579.545 QTR 0300/0400/0500/0600Z

Call: CQ BA/GB DE yourcall K

The later into the wee small hours ye be on watch, the better the band she be.

Rumored it is, byes the bye, that there be duelling ArcusFivus beasties about, an' some be a'swearin' there be BCus-375us about, an' others a'swear's they 'eard Henrietta Hartley an' her fine stable o' ladies about on the ether..... Wouldst be a fine party it seems, on the ether tonite. So, plys ye the ether seas, an may ye all have faire windes an' followin' seas this fine weekend burning fine firebottles, an' swattin' fine glowbugs, an' generally carousin' as it be, on the BA/GB watch, wid yer fine rigs in tow..... Sees ye there, mateys!

73/ZUT DE NA4G UP

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996

From: afpgreg@state.me.us (Paul V. Gregory)
Subject: Behind Door # 1?
Message-ID: <199604041207.HAA28217@gatekeeper.ddp.state.me.us>

Ahoy,

P.S. Folks who wish to praise or laugh at me privately re: 51J-4 purchase may contact me at afpgre@state.me.us. I welcome ur comments. Sifer BW. --Paul

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: jkh@lexis-nexis.com (John Heck)
Subject: Bill Moore?
Message-ID: <9604041517.AA14377@beans.lexis-nexis.com>

Email to Bill Moore gets returned to me with "unknown host". I seem to recall Bill posting a note indicating that he was going through some kind of a change and he was late on his replys. Does anyone have a status on Bill? Thanks.

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Lrware@aol.com
Subject: Boatanchors.forsale.list
Message-ID: <960404214525_264396749@mail06>

OK keepers of the firebottle flame:

I know based on the number of FS posts that a lot of people have stuff to sell...

This is a reminder that if it doesn't sell on the first post, a good place to list it is in the "for sale" archive list at theporch.com.

I update the list whenever the status of something on the list changes.

It's been a while, but no one has asked for an "add" or "delete" in weeks.

If you would like your BA whatever placed on the list, send me e-mail telling me what it is, what you want for it and how people can reach you.

(See the archive for suggested format info...)

Thanks,

-Larry Ware

lrware@aol.com

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Frank_Scutch-EFS003@email.mot.com
Subject: Central Electronics 100V/200V Comments
Message-ID: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>

Thanks to Dave, K4JRB on the info concerning "Multi-Phase" CE products. I

always wondered what that meant. I knew the CE stuff didn't use a crystal filter which makes sense.

Could someone comment on how they like the 100V/200V? I've had a chance to pick one of these up a couple times now but I have been told that these rigs are a bit "wide". I assume that means the bandwidth of each sideband is greater than 3kc?

I've got the 600L and it would be nice to have the matching transmitter but I'm wondering if I have to continually fight with people on both sides of me because of my wide signal - what's the point? I'd end up not using the rig.

Frank Scutch, WB4AYJ
efs003@email.mot.com

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Peter Ferrand <pferrand@scoot.netis.com>
Subject: Re: Central Electronics 100V/200V Comments
Message-ID: <199604041743.MAA15801@scoot.netis.com>

Frank:

I've been using a pair of CE 100V's for fifteen years now, and it should follow that I love them. I think it's the best rig ever marketed to hams (no commercial version to my knowledge). It's not perfect - biggest problem is the design of the vernier for tuning - but it's exceptionally clean and low distortion on the air, reliable, etc.

As to the wide signal, that is possible - I've had to replace the audio bandwidth shaping caps in both units. They are critical components and it's a normal consequence of aging. The characteristics of 1950's phasing means the bandwidth and suppression have a shape factor that's a lot broader than with a crystal filter - so the rig isn't really broader necessarily but the slopes fall off more gradually. This means the rig sounds much better on the air, since this is much kinder to the audio for many reasons - edge distortion, group delay, etc.

At this same time, if you hit the high frequencies harder with a wide response mike, you will indeed have a broad response. I use an EV 607 communications type mike, or a Heil HC-3 and it works fine, except the Heil picks up too much air conditioner and other room noise, so I don't use it anymore.

Actually, I've bypassed the audio shaping from the rig I use so

it'll work for wideband AM (and it does) but for sideband I run audio through a Drake SP75 and that sounds fine too.

73,
-Pete
WB2QLL
pferrand@scoot.netis.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Sandy Blaize <70401.134@compuserve.com>
Subject: Central Electronics 100V/200V Comments
Message-ID: <960405015616_70401.134_IHD39-2@CompuServe.COM>

Frank,

A lot of the "new" crowd of goons on SSB have never heard a "phasing" type SSB transmitter! That's the BIG problem! They usually have MUCH BETTER fidelity than a filter rig, anyday! Also people have a tendency to get as close to the next QSO in the band that they can! IGNORE the 'wide signal' reports. OR you

can use the retort: "I see you have never heard a phasing SSB signal before!" Usually if you show them just how stupid they are, they will cease and desist! I have a 100V and had an HT-37 and the old 10B and 20A. They are all phasing rigs! They sound great! I'm assuming your sideband supression is OK? Have someone check your upper while you are on lower and vice versa. You should have about 30-40 db. of unwanted sideband suppression at least. If you don't, the sideband generator may need to be aligned. A fairly easy job with a good sinewave audio generator and a 'scope. Just follow the instructions in the manual!

Don't let someone tell you your signal is bad unless he knows what he's looking for and knows what he's doing! There is a lot of people around nowadays

who think they know everything and know next to nothing! After over 45 years in this game, I am still learning! It never ends. Don't take anything as gospel from anybody!

Always do your own research on the subject to check them out, AND, enrich your own knowledge base. If you find somebody that says he's always right, ignore his advice!

Good "100Ving"!

73,

Sandy W5TVW

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Michael Crestohl <mc@shore.net>
Subject: Collins 32S-1 & 516B2 ACPS for \$150.00
Message-ID: <199604041220.HAA15091@northshore.shore.net>

Hello Jeffrey:

I would highly recommend this transmitter provided of course that it is clean. It was a very good CW transmitter. There were many differences between it and the 32S-3(*) transmitters but it is perfectly adequate. I would recommend that you look for a 75S-3(*) receiver for its companion because these offered more versatility for the CW op in filter selection.

The power supply and cabinet alone are worth \$100.00. You can't go wrong at that price. I have owned Collins equipment continuously since 1966 and still enjoy operating and tinkering with them several times a week.

73,

Michael Crestohl, KH6KD/W1
mc@shore.net

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "Cal J. Eustaquio" <ceustaqu@violin.aix.calpoly.edu>
Subject: Re: Collins 32S-1 & 516B2 ACPS for \$150.00
Message-ID: <Pine.A32.3.91.960404043324.53568C-100000@violin.aix.calpoly.edu>

But what ARE the differences between the S-1 and the S-3, eh? I'm interested because I have the former. Cal.

On Thu, 4 Apr 1996, Michael Crestohl wrote:

> Hello Jeffrey:

>

> I would highly recommend this transmitter provided of course that it is
> clean. It was a very good CW transmitter. There were many differences
> between it and the 32S-3(*) transmitters but it is perfectly adequate.
> I would recommend that you look for a 75S-3(*) receiver for its companion
> because these offered more versatility for the CW op in filter selection.

>

> The power supply and cabinet alone are worth \$100.00. You can't go wrong
> at that price. I have owned Collins equipment continuously since 1966
> and still enjoy operating and tinkering with them several times a week.

>

> 73,

>

> Michael Crestohl, KH6KD/W1
> mc@shore.net
>

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: Collins 32S-1 & 516B2 ACPS for \$150.00
Message-ID: <Pine.GS0.3.92.960404094742.3592A-1000000@iglou>

> > I would highly recommend this transmitter provided of course that it is
> > clean. It was a very good CW transmitter. There were many differences

I must take exception with this statement. The S1 used an audio tone to produce cw through the sideband circuitry. It was so baaaaad that the FCC even took action against Collins. This was fixed in the later versions. It still is worth that price though.

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Jeffrey Herman <jherman@hawaii.edu>
Subject: Re: Collins 32S-1 & 516B2 ACPS for \$150.00
Message-ID: <Pine.SV4.3.91.960404062001.14685D-1000000@uhunix5>

> I must take exception with this statement. The S1 used an audio tone to
> produce cw through the sideband circuitry. It was so baaaaaad that the FCC
> even took action against Collins. This was fixed in the later versions.
> It still is worth that price though.
> Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

Audio tone to produce CW? Sounds like it might have had the capability to xmit in A2 - with its associated dozens of harmonics. Ahhhh, A2 on the maritime bands was music to my ears! You see, your BFO will provide an audio tone but when the on-off carrier is also modulated then you hear shear music! The result is as if Morse is being sent on a piano keyboard using both hands. Lovely lovely lovely. I always made sure NMO's transmitter was in the A2 mode while I sat the 500 kc watch.

Oops - this is illegal on the ham bands, though. Phooey.

Jeff NH6IL

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Steve Bertsch <sbertsch@x1.us.ohio-state.edu>
Subject: Drake parts
Message-ID: <199604042116.PAA05339@uro.theporch.com>

In the mail today came a list of Drake 2A/2B parts that are still available.
Stuff of interest to BAer's, all is for the 2-B except as noted:

P.N.	Description	\$\$	
2105000	PC ASSY CONVERTER	4.00	
2105005	PC ASSY 3KC	2.50	
2105010	PC ASSY IF	4.50	
2105015	PC ASSY AUDIO	3.50	
2105020	PC ASSY DET	3.00	
2519000	T-2 455 kc IF	6.00	
2519005	T-3 3.9-4.5 mc IF	6.00	(should be T-1?)**
2519010	T-4 405 kc OSC	6.00	
2519015	T-5 3.9-4.5 mc VFO	6.00	(should be T-3?)**
2519020	T-6 3 kc LP filter	6.00	
2519025	T-7 50 kc BFO	6.00	
3200210	CAP VARIABLE	20.45	
3260390	RES VAR CM24490 5K	2.95	
3260400	RES VAR CM25459 15M	2.95	
3260410	RES VAR CM25460 2M	2.95	
3260420	RES VAR CM27367 1.5K	2.95	
3260430	RES VAR KY1971 500K	2.95	
3580210	METER S UNITS	7.30	(2B/2C/R4B)
3690120	XFMR OUT CT864	7.51	(1A/2B/TR4C)
3690355	XFMR PWR CT-1589	15.00	
3850015	INSTR MANUAL	10.00	(2A)
3440519	FRONT PANEL	15.00	(2A)
3291060	PLUG 4 PIN 8-1424	.55	
3450400	KNOB GENERAL	.71	(didn't say for what)

** These have to be mistakes, on the 2-B schematic T-5 is the passband tuning/switch assembly.

They had tubes, but AES is much cheaper.

Contact:

William A. Frost, Service Manager
R. L. Drake Co.
230 Industrial Drive
Franklin, OH 45005

(513) 746-6990

-
Steve, N8KWV

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: jml@spider.lloyd.com (Jim Lockwood)
Subject: Re: Drake parts
Message-ID: <m0u4xEI-000TqPC@spider.lloyd.com>

To add just a small amount of value to Steve's report on available Drake parts:

At 03:17 PM 4/4/96 -0600, Steve Bertsch wrote:

>
>
>In the mail today came a list of Drake 2A/2B parts that are still available.
>Stuff of interest to BAer's, all is for the 2-B except as noted:

>
>P.N. Description \$\$
>-----
>
>3200210 CAP VARIABLE 20.45

This is the preselector variable. If anyone needs to change one of these, contact me for all the [g,b]or[y,ing] details of how to do it. It's a lot of tedious work.

>3580210 METER S UNITS 7.30 (2B/2C/R4B)

Strictly speaking, this is not correct for the 2B. This is the R4B meter that just happens to be compatible with the 2B. The differences are minor and cosmetic, but noticeable.

>3450400 KNOB GENERAL .71 (didn't say for what)

I'm told by the Drake service department this knob more closely resembles the 2C knobs than those of the 2B. Not having a 2C in front of me to compare, I'm not sure what this means other than it's not a 2B knob.

73,

Jim - km6nk

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Nick England <nick@cs.unc.edu>
Subject: dummy needs help
Message-ID: <199604042037.QAA22877@altair.cs.unc.edu>

I ought to know what's happening with my Heath SB-110A 6m SSB xcvr, but I'll admit I don't. I'm either blind, or ignorant, or stupid or maybe all 3, I'll admit up front. I'm throwing myself on the mercy of you assembled boatanchorites....

Here's the problem in a nutshell -
Load up the xmtr normally (250 ma plate current) and I get 40 watts CW out. It oughta be more like 100 watts CW.

Circuit description - usual Heath SB xcvr design - xtal oscillator mixed with LMO - driver: 12BY7 - final: pair of 6146's.

I went through the whole alignment and neutralization procedure (a couple of times). Tried new final and driver tubes. No difference.

One thing that seems off is I don't get as much self-bias on the finals as the book says. Fixed bias is around -45v, should go to -70 to -90. I get -55 at max drive.

The other thing that seems off is that max output occurs pretty far off min plate current. I know that the two don't coincide for linear amps, but have I got something funny going on here ? Tried 2 different watt meters and dummy loads supposedly good to 250 MHz. No difference.

So with high plate current and low output, I'd suspect parasitics? Probing with a 300 MHz scope shows nice pretty 50 MHz sine waves and nothing else though.

The self bias thing is puzzling - I've checked component values around the grid circuit. Maybe just not enough drive ? But if that is so, why is the plate current so high?

Have I got a combination of things - low drive (so low self-bias) and a funny output load (so the plate current is way up because I'm tuned way off resonance)? Or is one problem causing both symptoms ?

I been reading the ARRL and other handbooks, but I still don't understand it. If it was an AM rig, maybe I'd have a better grip on the problem.

Oh yeah, rcvr works OK, and the xmtr signal looks OK on a scope and sounds

OK on the air.

Any hints would be greatly appreciated - I've got thick hide - let me have it.
Maybe we'll all learn something here.

thanks gang,
Nick KD4CPL
nick@cs.unc.edu

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Radiomatt@aol.com
Subject: Eclipse today
Message-ID: <960403161008_368445694@emout04.mail.aol.com>

There will be an eclipse tonite (Wed April 3) about 5PM EST; totality is scheduled to last a while, so there may be interesting DX

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Paul Thekan <Paul.Thekan@pgtp.varian.com>
Subject: EIMAC Binder Pickup
Message-ID: <2.2.16.19960404065220.29bf31d8@pgtp.varian.com>

I will be at the Foothill Swap on saturday April 13th. Those wanting the binders can meet me at the coffee / food stand at 9 am . I will be wearing a black baseball cap and will be carrying a gray EIMAC binder. Hope to see you there.

73
Paul

Paul Thekan - Speaking for Himself
Paul.Thekan@pgtp.varian.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Duby Todd <dube3@n-link.com>
Subject: faster music
Message-ID: <31636858.787E@mail.n-link.com>

> These same guys used to carefully
> wrap a layer two of mylar splicing tape, using a carefully
> spiralled cut for smoothness, around the turntable capstan to
> make the music sound "more upbeat."
> Now, after all these years, I learn why the music on the radio never seemed to be in tune with my instruments....

73,
Dube AB5AP dube3@n-link.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Henry van Cleef <vancleef@bga.com>
Subject: Re: faster music
Message-ID: <199604040841.CAA21202@zoom.bga.com>

As Duby Todd said

>
> > These same guys used to carefully
> > wrap a layer two of mylar splicing tape, using a carefully
> > spiralled cut for smoothness, around the turntable capstan to
> > make the music sound "more upbeat."
> > Now, after all these years, I learn why the music on the radio never
> seemed to be in tune with my instruments....

>
You're learning, you're learning. What comes over a radio broadcast
has often been mangled within an inch of its life.

The two standard gimmicks are to play popular music up to a semitone
sharp and to run everything through a compressor so that modulation
centers on about 85%, with about a 10db dynamic range.

If you want to see something, put your instrumentation on an audio
amplifier playing the output of a CD-rom player with a good classical
disk of a large orchestra. As I write, I am testing an audio amp with
Bruckner's 4th Symphony, Lopez-Cobos conducting, on Telarc, which has
something like an 80db dynamic range. It's certainly showing all the
warts in that amplifier----inadequate power supply, quiet passages lost
in the hum while loud passages have flat tops and bottoms from
grounding out, etc. etc.

We won't say anything about this "test" being a thermal runaway test on
a totem pole output circuit that has had germaniums replaced with
silicons.

--

Hank van Cleef vancleef@bga.com vancleef@tmn.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996

From: debral@falcon.cc.ukans.edu
Subject: FS -- DRAKE C-LINE STATION
Message-ID: <199604042200.RAA02741@postoffice.reston.mci.net>

..... DRAKE C-LINE STATION

BASIC PACKAGE:

- * R-4C Receiver (serial # 16320)
- * T-4XC Transmitter (serial # 20489)
- * MS-4 Speaker
- * AC-4 Power Supply

INCLUDED EQUIPMENT & ACCESSORIES:

- * Crystals for WARC, WWV, etc.
- * CW filters -- 250 Hz + 500 Hz
- * Owner's manuals --
Excellent condition, no underlining, no torn
pages, and no coffee stains.
- * Original connecting cables in mint condition.

DETAILS:

- * All units are in excellent, near-mint condition.
- * R-4C recently aligned by Drake at their
Franklin, Ohio facility.
- * NO dents!
- * NO stains!
- * Absolutely original condition. NO mods!
- * Know defects:
 - o Missing cover for the accessory crystal sockets at
the rear of the R-4C.
 - o Finals a bit weak on the upper freqs.

.....

Asking \$575 + shipping.

Please e-mail with offer or request for additional details.

73s

Bill Worthington
AA4FM/0
Eudora, Kansas, USA

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "JOHN A. KING (WA1ABI)" <JAK@SUD2.ED.RAY.COM>
Subject: FS: Halli HT-33A Amplifier
Message-ID: <01I34WZJB6PE90NVUV@SUD2.ED.RAY.COM>

Posted for a local friend - pse respond directly to him.

For Sale - Hallicrafters HT-33A Linear Amplifier. VG-EXC
condition with original manual. \$500 + shipping from RI.

Contact Marc, WC1X, in Middletown RI at (401) 849-8531 eve.

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "Dale A. Hagert" <daleh@skypoint.com>
Subject: FS: Msc Gonset, National, EF Johnson, etc
Message-ID: <3162F421.3D13@skypoint.com>

I am posting this for Herb Reich K0UBK. Please contact him at
612-455-7898.

Johnson Valiant excellent condition inside and out Original manual \$400
Gonset Communicator III 2 meter \$75
National NC300 with matching speaker copy manual \$300
Eico 753 with WRL power supply \$150

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: doowah@indirect.com (Rodney Mullins)
Subject: FS: R390A (from Rick Mish @ Miltronix)
Message-ID: <199604040437.VAA18572@ns2.indirect.com>

For sale:

R390A/URR receiver.

Stewart-Warner, S/N 1699, Order #42428-PC-59 (1959 vintage).

Masterfully reconditioned by Rick Mish of Miltronix in Toledo, OH. Includes his EXTERNAL AGC mod for superior, hassle-free SSB reception (easily removable/switchable).

I waited 3 months for this rx (this man is BUSY!), and have only had it for less than 6 weeks. Truly the finest SW rx I've ever owned. Unfortunately for me, a financial emergency dictates that I must sell it, much to my chagrin. (Can we say "IRS"?!)

Anyways, if you are unfamiliar with Rick's work, just ask around this list for some glowing references. He is the master. He painstakingly cleans the units that he deems worthy of his magic touch, lubes the gear-train on the RF deck, performs a first-class alignment and calibration of the rx, and the proceeds to make it cosmetically perfect. This baby looks like it came fresh from the factory, and it is sensitive (and quiet) beyond belief for such "legacy" equipment. Rick does his job so well that it would pass what he calls a "depot-level maintenance inspection". I dunno what all that means, but it sure gets the job done! He is the MAN, and his level of knowledge regarding these rxs is astounding. He can talk yer ear off when discussing an R390A, and seems to be almost passionate on the subject. 'Nuff said...

With the external AGC mod and shipping/handling charges, I have exactly \$845 invested in this fine machine. I am asking \$700 <firm> COD UPS and I will pay shipping to anywhere in the US (48 contiguous states) plus insurance. You will get the rx and the repro copy of the manual that he sent me, and his personal notes. PLUS I will throw in \$20 worth of the "special" antenna connectors that this radio requires ("C" connector for RG/8 coax, "C" connector for RG/58 coax, and the "twinaxial" balanced connector), all brand new (unused) in the package they came in (all are Amphenol).

Email me, if interested. Please, only serious offers since I am in a bind and need to sell this unit quickly.

Phone # is (602) 245-2073, EVENINGS AND WEEKENDS ONLY. (Email preferred, however.)

Hurry... I might change my mind! ;-)

Rodney

doowah@indirect.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Thomas Bryan <tbryan@mailstorm.dot.gov>
Subject: FS: Russian radios
Message-ID: <199604042213.RAA10829@mailstorm.dot.gov>

Hello All,

I have for sale several Russian VHF FM manpack radios.
They are mostly tubes with a few transistors. I am selling them as-is with
antenna, headset, manual copy in Russian, and English operating instructions.
The radios are checked out and working.

R-105M 36-46.1 MHz
R-108M 28-36.5 MHz
R-109M 21.5-28.5 MHz

About 1W out.

First come, first served. I only have a few. \$135 ea. set.

If you need more information send me an email.

Tom Bryan
tbryan@mailstorm.dot.gov
Opinions expressed are my own.

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Randyc3@aol.com
Subject: FS:Drake SW4A and Misc
Message-ID: <960403231945_263624804@emout09.mail.aol.com>

Drake SW4A- Very good condition \$190. With extra (new) tubes and Manual. Nice
radio, but no room. Email me for details

"Communications Receivers" by Moore (3rd edition) -\$10
"Fine Tuning" 1988 - Compilation of SWL articles. \$10. This issue has
articles on R390, HQ150, HQ180.
S&S Engr. Freq Counter (with offset adjustment). \$100. Perfect for adding
digital readout to your boatanchor. With manual.

Randy Cook

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "Lahlum Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: FW: 5AR4 supply
Message-ID: <9604032158.AA06464@kay.wes.mot.com>

I'm curious about your comment about serious rock groups. Why is it necessary to replace all the tubes in their amps after every performance?

>The 5AR4 is also widely used on guitar amps. Those folks use them in
>self-destruct mode. Any serious rock group has to replace all the
>tubes after every performance. They are the primary consumers of NOS
>tubes. (They are also the primary market for new tubes from Russia &
>China.)

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: "Lahlum Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: FW: Ray Moore's Book (Re: SX-62B Minus BF0)
Message-ID: <9604041647.AA13402@kay.wes.mot.com>

Anybody know if there is a Moore book on transmitters yet? If not, what would be the best book of its ilk to get? I'm itchin' to get a BA tx but have no idea what's worth pursuing right now (ARC5 maybe?).

Thanks,
Ross KB9JJR

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: John Shriver <jas@shiva.com>
Subject: Re: guitar amps (was 5AR4 supply)
Message-ID: <199604041444.JAA12923@shiva-dev.shiva.com>

Guitar amps, to make an electric guitar sound good, must have high harmonic distortion to provide the overtones the electric guitar lacks. This is done by deliberate overdrive of various stages in the amp. This often includes driving the output tubes deep into grid current. Also, since the amps were meant to play LOUD, they run the output tubes at or beyond the voltage and dissipation ratings of the tubes.

Doing this is tough as hell on the tubes. Plus, you cannot afford to lose an amp in the middle of the show. So, they use lotsa tubes.

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Michael.J.Knudsen@att.com
Subject: Re: guitar amps (was 5AR4 supply)
Message-ID: <9604041708.AA05831@bock.ih.att.com>

So, what do the roadies do with the slightly (?) used tubes after a concert?
Hope they don't just pop 'em into the mosh pit.
Sell 'em to audio phreaks as "slightly used?" Drop 'em off at the
nearest hamfest? Some of those tubes must still have lots of life in 'em,
especially for those of us who don't run them too hard.

BTW, reminds me of the old CAA/FAA airport stations, that kept a logbook
and replaced tubes after X hours no matter what. As a kid I knew a tech at
the local airfield who gave me some really neat stuff -- 849s, 250THs,
129B UHF, etc. Most of them lit up fine on the old Lionel xformer.
Long after my folks threw them out, I found out that hams would kill for
some of those, even after the FAA had got their licks in.

I sure HOPE the FAA treats their gear better than a rock band!
73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: oranges@FRB.GOV
Subject: GV3A-xxxx data sheet say it is a tube.
Message-ID: <164248d0@ccmail.frb.gov>

Hello BA'ers

Got a data sheet on the GV3A family faxed to me.
It says that it is a HI-Voltage regulating diode tube
designed to regulate high voltage power supplies
in radiation detection and photo-multiplier tubes,
as D.C. coupling elements and for other high
voltage - low current applications.

They are available from 400v to 2500v ,
that being what the GV3A-XXXX is.

^^^^

The data sheet says the Anode is marked
by a Red dot at the base of the tube.

Thanks to the people who provided info and
Victoreen's Phone Number.

Fred Bohner Arlington,VA

Email address is oranges@frb.gov
MESSAGE FOR PERSONAL USE NOT OFFICIAL USE

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Gary Pewitt <gpewitt@execpc.com>
Subject: Re: GV3R???
Message-ID: <Pine.SOL.3.91.960403150036.4852A-1000000@earth>

I believe Victoreen made geiger counters for civil defence.
The tube could be a radiation detector.

On Wed, 3 Apr 1996, John Shriver wrote:

> From: Ray Cote <75121.100@compuserve.com>
>
> <it is marked GV3A 1300R,
>
> I have a few of those also and cannot ID them either. All I know is they
> are made by Victoreen and they have 2-pins or wires as leadins. Anyone shed
> some light on these or the company Victoreen?
> I have:
> GV3B-400
> GV4S-310
> GV4S-3100
> GV4S-410
>
> Victoreen? Those are probably tubes for geiger counters. There are
> collectors of geiger counters (I've met one at fleas around here), and
> they often need to find new sensor tubes.
>
> If they are glass, they are rather early first-generation ones. Later
> ones used envelopes less opaque to radiation...
>

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: "TOM CLINTON" <TOM_CLINTON_at_AS0200@mail.hq.faa.gov>
Subject: HRO Rf alignment
Message-ID: <9603048286.AA828645035@mail.hq.faa.gov>

Thanks to all who responded to my request for help in aligning HRO-60
coils. Now...if anyone has a spare xtal calibrator for a HRO-60!

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: n5off@w5ddl.aara.org
Subject: I'll Take R-392 Data Too
Message-ID: <339399@w5ddl.aara.org>

Ok, I'll start keeping track of the contract data for the 389,390,391,392 and derivatives such as the R-725.

In the past I have kept a "back of the envelope" list of the contracts for these as they leaked in. If you've got one of these, send it to me, and I'll keep track of the order numbers and high s.n.'s.

73 de tom

Reply to:

packet n5off@k5arh.#lft.la.usa.noam
Email (home) n5off@w5ddl.aara.org@usl.edu
Email (work) tfma@chevron.com

Lafayette, LA

office 318-989-3430

home 318-984-2561

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "David L. Thompson" <thompson@mindspring.com>
Subject: Re: Info?:Signal Slicer by CE
Message-ID: <199604040307.WAA13435@borg.mindspring.com>

At 09:51 PM 4/2/96 -0600, you wrote:

>Hi Productive Detectors-

>Does anyone know anything about the Central Electronics slicer? Like what is

>i.f. input kc.? these are the 10A/B, 20A, 100V xmit folks who never made a

>receiver, but I know a garage where a slicer rests and I wonder if it would

>mate with my R390/390A (offspring=bowling balls?) for 100% HS SSB. Or is

>the CE Slicer a sideband generator (why would it be-CE made only SSB rigs?)

>Guess its a trip to the garage.....Info appreciated

>Thanks Jim Dillon beadgal@ptialaska.net

>

Central Electronics who wanted their gear call "Multiphase products" made 2 slicers. The A slicer was just a slicer, the B slicer had a Q mult included. Both matched 450 to 500Khz IF's as most receivers were 455 khz. They made a unit called the ACP-1 and 2 also. The ACP-1 let you switch back to just the receiver before the slicer. The ACP-2 was an ACP-1 with a crystal feature that let you match to several other If freqs such as 50, 310, 910 Khz etc.

Their slicers were early models of a fairly long generation of slicers made by CE (Multiphase), TMC, B&W, Lakeshore, Hammarlund, RME, and since someone

has one(Eldico). I think ELENCO made one for a while and the most popular version was from Hammarlund (HC-10 for hams and SPC-10 for military). If SP-600's were made by numerous mfg's then the SPC-10 or equivalent was probably the same (Eldico??). RME and Hammarlund also incorporated it into their receiver line. The RME 4350/4501 was modified somewhat as the RME 6900 (their last gasp). The HC-10 was mated with the HQ-110 for the HQ-170 and mated with the HQ129X series (HQ160 the last) to be the HQ180.

Central electronics wanted all their gear to be called the Multiphase line...Multiphase 10B not the CE 10B. Never did and finally gave up as the CE 200V dropped the name. I understand they came out of Zenith and later merged into another company and quit the ham market. Their gear was phasing SSB (hence Multiphase) rather than filter that Collins and Drake adopted.

Dave K4JRB

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: John Kolb <jlkolb@cts.com>
Subject: Re: Info?:Signal Slicer by CE
Message-ID: <Pine.SCO.3.91.960404090112.10101B-100000@sd.cts.com>

On Wed, 3 Apr 1996, David L. Thompson wrote:

> Central Electronics who wanted their gear call "Multiphase products" made 2
> slicers. The A slicer was just a slicer, the B slicer had a Q mult
>
> Their slicers were early models of a fairly long generation of slicers made
> by CE (Multiphase), TMC, B&W, Lakeshore, Hammarlund, RME, and since someone
> has one(Eldico). I think ELENCO made one for a while and the most popular
> version was from Hammarlund (HC-10 for hams and SPC-10 for military). If

I thought the 10-A and B were just phasing type SSB detectors. Not really the same product as the HC-10, which provides bandwidth control, vernier freq tuning, AM or SSB product detectors, but not phasing type SSB.

John Kolb

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Info?:Signal Slicer by CE
Message-ID: <9604041643.AA05787@bock.ih.att.com>

Nice rundown on CE, tnx. Years ago I picked up a CE Multiphase Q-Multiplier. A very nice unit. Small box, smaller than the original Heath job, but two tubes inside and a very fine vernier variable cap. The cable has not one but two shielded lines (making me wonder how you'd hook it into a rx) plus wires to steal power from the rx. When I got it the cable had been chopped off flush with the box, so I've never tried to put it on the HQ129X.

But it does have that "Multiphase" name and logo with the filled-in sine wave, and I wondered what multi-phase had to do with Q-multiplying. I never thought much of Q-mult for AM and SSB, except in the notch-reject mode to filter out hets. 73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Andy Wallace <wallace@mc.com>
Subject: Re: K1JJ's QRP-AM net on Sundays
Message-ID: <9604041237.AA08671@kali>

----- Begin Included Message -----

From: Jeff Duntemann <jeffd@coriolis.com>
Subject: Re: K1JJ's QRP-AM net on Sundays

The 6AQ5As are easy. What are they using for a modulation transformer? That's the killer.

I'm *still* scouring the earth for a UTC-S19!

--73--

--JD--

----- End Included Message -----

Hope you don't mind me cc:-ing the List!

>From what I've heard, some of them are using series modulation and that doesn't need a transformer, apparently. I checked a couple of indexes in ARRL Handbooks of the 50s and didn't see a reference to that. Perhaps some BAer can enlighten me.

Perhaps using an output transformer backwards? I have heard reference to the famous 70V line transformer, so maybe that can be used at these power levels.

My antenna is too cruddy to do QRP-AM, and I can barely hear some of these folks -- but it's an interesting challenge

and it sounds like K1JJ has stirred the homebrew pot quite well.

73,
--Andy
wallace@mc.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: kenc@smartdocs.com (Ken Corwin)
Subject: Knight Kit Sweep Generator
Message-ID: <199604032246.0AA23269@warp10.smartlink.net>

Hi, Gang-

Who was looking for a manual for subject generator?

Regards,

Ken Corwin (kenc@smartdocs.com)

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Michael.J.Knudsen@att.com
Subject: Knobs for HQ129X
Message-ID: <9604041701.AA05822@bock.ih.att.com>

Do you need knobs for a 129X? I found an unlikely source that you may be able to find also.

Last summer at the Elgin IL ARCI Fest I bought a couple of Sylvania signal generators --
a nice big LF/HF job and a small sweeper. I sold the big one for what I apid for the pair and kept the sweeper.

Last nite, was sorting the stuff around and noticed that the small knobs on the Sylvania were teh same style as on my HQ129X -- those wimpy, sort of melted looking pointer knobs. That led me to check out the two big knobs (tuning and bandswitch), and darned if they aren't the same grooved mushroom style as the two big ones on the Hammarlund!

So look closely at the BA test gear at the next swap. Sylvania stuff is light green with aluminum trim. Nice looking, and very well built inside too -- certainly not Boonton quality, but a cut above Hickok. In view of that, I don't plan to sell the knobs off mine, but hmmm, I have plenty of replacement knobs, so if someone is desparate to restore a 129X I will

listen to your plea....

BTW, is it just me, or does the 129X have the worst knobs in Hammarlundom? Wimpy looking, hard to grasp and turn, and guranateed to let your fingertips wear out the paint on the front panel. I mean the little ones; the big ones are OK abut agin fall down in the looks department. Years ago I put Heath style knobs on my 129X; they would look nice if they were black. I think modern Hammarlund knobs (as in 180) would look and feel best.

I do have the originals in a bag inside the radio, so my widow can get mroe for the set, but they are no fun to operate. 73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Michael.J.Knudsen@att.com
Subject: Re: Linear on AM / Mystique of plate modula
Message-ID: <9604031729.AA05507@bock.ih.att.com>

Is assymmetrical modulation on BC stations the reason why some announcers have that gravely, gritty sound normally associated with sandy-state portables, even on a good tube set?

Actually I'm surprised that BCers don't use carrier-control like the Heath DX-40/60. That would fool your rx's AVC and make the station sound louder, which every BC station seeks to do. Maybe the FCC hasn't yet permitted that, but give 'em time.
73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: DUBY Todd <dube3@n-link.com>
Subject: Re: Linear on AM / Mystique of plate modulation
Message-ID: <31636177.4B74@mail.n-link.com>

Andy Wallace wrote:

>
> Is is just me or does it not make sense that plate modulation
> shouldn't be any "better" than grid modulation? I mean, if you're
> wiggling the electrons on one element versus the other -- what
> is the difference? What is it about using brute force at
> the plates that makes it possibly "sound better" than if you
> drive things at the grid and then do linear amplification further
> downstream?
> 100 percent modulation requires that the modulating signal drive the
carrier to, or very near to, cutoff on negative peaks. No tubes that I
know of will have a linear operating range near enough cutoff to avoid
high distortion; therefore grid modulation has to be done so as to keep

the tube in the linear portion of its characteristic curve.

Plate modulation can drive a class-C stage to cutoff, but remember that the modulator has to have a power output equal to half the carrier power, and that power is in effect added to the carrier on positive peaks. The modulated carrier should have an audio component that is very near that of the modulating signal.

73,
Dube AB5AP dube3@n-link.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: don merz <71333.144@compuserve.com>
Subject: Misc Military & Mic FS
Message-ID: <960404135833_71333.144_DHB35-1@CompuServe.COM>

For Sale

CONTACT: Don Merz, N3RHT: 47 Hazel Drive, Pittsburgh, PA 15228.
412-234-8819 (weekdays, EST or leave a message anytime).
71333.144@compuserve.com. Offers and Trades welcome.

Large bullet-mic. This mic is larger than a JT-30. It is plain polished metal (no paint) with a horizontal grille bars and a "fin" running down the middle making a neat streamlined deco look, if that makes any sense. It has a mount for a stand on the bottom and the old fashioned single-contact mic connector on the bottom. The only marking is half of a decal that I think once said "American Microphone Company, made under patents of AT&T company for use with public address systems only." The metal has some pitting and surface blemishes. It might be impossible to make it look perfect again. But it's pretty impressive as-is. \$20
AN/GRR-5 antenna. This is the whip antenna that mounts on the AN/GRR-5 radio. All 3 sections. Perfect condition. \$30 or trade for ???
SCR-193 (BC-191/BC-312) original manual. Some marks on cover. TM 11-273. 1941. \$28
ARC-5 T-22 transmitter. 7.0-9.1mc. Beautiful shape except 3 mods--antenna connector changed to SO-239, rear power plug changed to octal and relay removed. Looks great. Works perfectly. \$39
ARA Command Set receiver CBY-46129, 190-550mc, with the rare Auxilliary Output Adapter CBY-62036. Very good original condition. With or without dynamotor. Trade for ??? or make an offer.

--

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Jim Dillon <beadgal@ptialaska.net>
Subject: Moore et al TX ref books
Message-ID: <01BB2201.0116BE40@juneau_78.dialups.ptialaska.net>

Hi Ross and TX/RXsearchers-

I wrote to Ray Moore some months back and at that time the book was not published and I am vague on its status, if any. I will write again. Meanwhile, Eugene Rippen (of Dynaco parts fame a few yrs ago) has published "Tube Type Transmitter Guide" (Manufactured and kits 1922-70 using all or mostly tubes).

Its a decent once over using not-so-great photo-reproed stuff from QST and other mags/lit. Gives vintage, manufacturer info, major features, and *finals* for most shown. Has 2 good indexes "Model and Make" and "Model Year"
I think its worth the \$17.95 *shipped (fast)* from:

Sound Values
Box 9
Auburn, CA 95604

Don't give me or Eugene a hard time about "I can't read the control function lettering" Prep for offset is not this (or any of Moore's editions) book's strength.

BTW I'm less than less than totally enthused about his second Opus: Ham Price Guide- 36 pages- a database of vintage and SS TX/RX, other ham gear. \$9.95 same address. Still I use it a lot....

If you don't have heaps of old Radio Paper in your stacks or don't live down street from Downtown branch of Denver public Library, these are pretty allright. If you already have lots of old paper, don't buy these. And don't forget Chuck Penson's Heathkit- A Guide to the Amateur Radio Products \$24.95 + \$3 ship from Electric Radio Box 57 Hesperus CO 81326

Anybody bought the spendy little (but well printed I hear) Collins pocket tome?

Jim Dillon WL7CMQ
seeking Halli SX-9 to-14 RCA AR/CR-88

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Thomas Lemar <lema@ols.net>
Subject: MRC-109
Message-ID: <3162FBB3.2505@ols.net>

A friend just called me and said he had acquired a transmitter. He believes it is made by collins and has a military number of

MRC109.

He does not know anything about this unit and neither do I.
I thought maybe this would be a good place to get the answers for
him. Does anyone out there know anything about this unit?

Thanks Tom Lemar
lema@ols.net

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Steve Bertsch <sbertsch@x1.us.ohio-state.edu>
Subject: Re: My experience - 8BN8 in 2B
Message-ID: <199604041557.JAA08523@uro.theporch.com>

Dale Braun <dale.k.braun@uwrf.edu> writes:
> When I tried replacing the
> 8BN8 in my 2B with a 6BN8 I had hum in the
> audio. Went back to a 8BN8 and the hum went
> away.

You might be on the right track here. I tried looking up the max allowed
heater-cathode voltage for these tubes; my GE book doesn't give that info
and my 1959 RCA book predates 8BN8's. Since 8BN8's were used in series
string TV sets, they might have better H-K isolation.

Anyone got a reference?

Steve, N8KWV

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: My experience - 8BN8 in 2B
Message-ID: <Pine.ULT.3.91.960404140628.24200B-1000000@admin.aurora.edu>

On Thu, 4 Apr 1996, Steve Bertsch wrote:

> You might be on the right track here. I tried looking up the max allowed
> heater-cathode voltage for these tubes; my GE book doesn't give that info
> and my 1959 RCA book predates 8BN8's. Since 8BN8's were used in series
> string TV sets, they might have better H-K isolation.

Steve, etc..... The 6BN8 and *bn* are identical except for the heater
voltage/current. 6.3V @ 600ma vs, 8,4V @ 459ma.

E-mail broehrig@admin.aurora.edu
CIS: Data / Telecom

73 de Bob, K9EUI

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Mikhael Brown <mikhael@hpcmmp13.sj.hp.com>
Subject: Need HG-1 Manual
Message-ID: <199604050143.AA017308581@hpcmmp13.sj.hp.com>

The title says it all. I need a manual for the Hallicrafter
HG-1 signal generator. Just picked up one at the Foothill flea
market this morning. I didn't even know that they made test equipment.
Nice unit but doesn't work above 10 MHz.

Let me know if you have one or can make me a copy. I would pay for
copy fees and mailing.

Thanks & 73

Mike N6WIG

--

mikhael@hpcmmp13.sj.hp.com

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: dgibbs@rational.com
Subject: RE: R390's/6082 tubes
Message-ID: <Chameleon.960404110249.dgibbs@meninx.ppp.rational.com>

Greetings all,

Well, I took the plunge and placed an order for 25 6082s from
this place. I needed a bunch, as well as another former
subscriber. I will report to the list when I receive these!

Dennis

-----Original Message-----

Yesterday I received my copy of glass audio. There is an ad from New Sensor

Corp for "oddball" tubes. At \$4 ea is listed the weirdo 6082WB
JAN(Raytheon) for the R-390 (not an A!) power supply..

..

THE KICKER: \$100 MIN ORDER

..

Their Phone # is 800 633 5477. Unfortunately, I'm not in the market to pool
an order for these as about a year ago I bought enough for quite a few years
at present consumption!

73's dave metzd@cfw.com

-----End of Original Message-----

Name: Dennis Gibbs
E-mail: dgibbs@rational.com
From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: "Grant Youngman" <nq5t@gte.net>
Subject: R390A Mods - Osterwald
Message-ID: <199604050305.VAA02201@uro.theporch.com>

In ER #26, Ray Osterwald published a set of fairly extensive
modifications to the R390A. His measured performance improvements
look nothing less than phenomenal.

Has anyone out there tried this set of modifications with equal
results?

Grant/NQ5T

Grant Youngman -- NQ5T
nq5t@gte.net
<http://home1.gte.net/nq5t/index.htm>

WANTED: Hammarlund SPC-10

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Michael.J.Knudsen@att.com
Subject: Re: R390A SSB adaptor
Message-ID: <9604042120.AA05925@bock.ih.att.com>

Ray, AES had tons of tube sockets of all sizes available recently. However, they may have sold most of them off. When you consider that tubes are used mostly "for renewal purposes" (to quote RCA), there isn't much market for sockets (although they sometimes need to be replaced to, when DeOxit fails).

Synch detection is indeed the way to go. Be nice if it could be switched to either Costas mode (no carrier needed) or the usual carrier mode.

I figure a 565 PLL and a PD chip would do everything but Costas.

I'm trying to decide whether an audio phase shift network (Hilbert Transformer) is needed to get selectable USB/LSB via phasing method. Or do we only need a set of 45-degree phase shifters at the IF freq? If the latter, then now I know how Sony fits it on one little chip.

This should be fun. I almost built something like this into my HQ-129X years ago -- but a little voice told me someday that clunker would be a vintage antique, and I shouldn't hack it :-)

73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: "Lahlum Ross" <ross_lahlum@msmail.wes.mot.com>
Subject: R390A Tube Prices
Message-ID: <9604042254.AA18301@kay.wes.mot.com>

Below is a comparison of R390A tube prices which I have been compiling. The enclosure's in Excel format, copied here as well for convenience (do enclosures propagate here?). The copy below may be kind of a mess for those restricted to fixed borders, but you can probably copy & paste it into your own spreadsheet. If this is a problem, let me know & I will try to find a better way to disseminate the data (recommendations welcome).

I'm still waiting for an answer from United.

If anyone else has a source they think should be added, let me know & I will include it in the next version.

Hope this doesn't take too much bandwidth.

73,
Ross KB9JJR

R390A Tube Price Comparison

Type	qty	Antique	Subtotal	Radio-Electric Supply
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Subtotal						
1	0A2	1	\$3.30	\$3.30		\$3.00
	\$3.00					
2	3TF4A	1	\$8.10	\$8.10		\$10.00
	\$10.00					
3	5814A	7	\$3.00	\$21.00		\$4.00
	\$28.00					
4	5654/6AK5W	2	\$2.40	\$4.80		\$3.00
	\$6.00					
5	6AK6	3	\$3.10	\$9.30		\$3.00
	\$9.00					
6	5749/6BA6W	6	\$2.80	\$16.80		\$3.00
	\$18.00					
7	6C4	3	\$3.20	\$9.60		\$4.00
	\$12.00					
8	6DC6	1	\$6.10	\$6.10		\$6.00
	\$6.00					
9	26Z5W	2	\$6.70	\$13.40		\$8.00
	\$16.00					
			TOTAL 1-9	\$92.40		
	\$108.00					
			TOTAL 3-8	\$67.60		

\$79.00
 Radio-Electric Supply:
 Don Gies, K4GIT
 (904)475-1950
 Rt 2 Box 2790
 Melrose, FL 32666
 Shipping \$4.50

Fair Radio

Subtotal Triode			
Subtotal			
	Type	qty	
1	0A2	1	\$4.00 \$4.00
	\$3.95	\$3.95	

2	3TF4A	1	n/a	n/a
3	5814A	7	n/a	\$4.95
	\$34.65			

4	5654/6AK5W	2	\$4.00	\$8.00
	\$2.95	\$5.90		
5	6AK6	3		\$4.50
	\$13.50	\$0.95	\$2.85	
6	5749/6BA6W	6	\$4.00	\$24.00
	\$2.95	\$17.70		
7	6C4	3		\$4.00
	\$12.00	\$4.95	\$14.85	
8	6DC6	1		n/a
	\$2.70	\$2.70		

9	26Z5W	2	\$9.00	
	\$18.00	n/a		

2,3,8 not available

2,9 not
available

TOTAL 1-9

\$79.50

\$82.60

TOTAL 3-8

\$57.50

\$78.65

Triode Electronics: (312)871-7459

begin 666 R390A-Tubes

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M ! @ $ S5 $ 8 T02 ! ^ @ H " P " " $ ( " " #P / WX " " @ # " , & @ ! 4 ( E ! ! @0 ; " , ! " ;
M " # , S , S , S , R ! " " ) $0 # P ) $ " \ # ! 7X " " @ # " 4 & @ " " 1 " ! @0 < " , ! @ ?
M " " " " 1 " " * $0 # P ) $ " \ % ! 14 $ " @ D " P " ! P " 0 @ ! ( ) " , " " ;
M " $ ( " 0 " " 0 # " D " " ! " " $ @ D " P * ! L " 0 @ 0 ( & " , " P = " $ " ! @ #
M " P " @ $ @ D " P - " < " 0 @ ! ( ) " , # @ ; " $ ( ' X " " @ $ " " * " " A
M ! ( - " 0 " 0 M " 4 - 3 @ Q - $ % ^ @ H ! " " $ ( " " < 0 ' X " " @ $ " , & @ " " A
M ! @0 ; " 0 ! " ; " " #5 " " ) $0 $ P ) $ ! , # ! 7X " " @ $ " 4 & @ " " ! !
M ! @0 < " 0 ! @ ? " " #Q " " * $0 $ P ) $ ! , % ! 14 ! @8 ! " " ! P ! @0 ;
M " 0 " " ; " " ) $0 $ P ) $ ! , ' ! 7X " " @ $ " D " " ! \ ' Y ' ! @0 ;
M " 0 " @ ; # , S , S , S4T % " " ) $0 $ P ) $ ! , ) ! 0 $ " ! @ $ " L " 0 " ! @8 ! " ,
M ! X " ? @ ( * " 0 #0 ' G " " #D & ! ! L ! " . ! L " " " ! . D " " D 1 3 " D0 $
MP T % ? @ ( * " 4 " " H " " $ $ $ A4 ! 0 ! " P #0 ' U - C4T + S9 ! 2S57 ( " @ ? @ ( *
M " 4 " @ ! " " " " $ ! ^ @ H ! 0 # ! H " 0 ! N0 8 $ & P % " 0 & P " S , S , S , S , 30 "
M " 0 ! $ ! < " 1 7 " P5 ^ @ H ! 0 % ! H " " (0 8 $ " % " 8 " P " " " 80 "
M " @ ! $ ! < " 1 7 " ! 045 ? @ ( * " 4 ! P < " " $ $ & ! ! L ! 0 ( ! L " " " " ( $ "
M " D 1 7 " D0 % P < % ? @ ( * " 4 " 0 < " % P < D & ! ! L ! 0 * ! L FIF9F9F9F9 $ T "
M " D 1 7 " D0 % P D % 0 ( & " 4 " P = " $ " ! @ % " P " @ $ @ D ! 0 - " < " 0 @
M ! ( ) " 4 # @ ; " $ ( ' X " " @ & " " * " " ! 1 ! ( . " 8 " 0 L " 8 " - D % + - B @
M ? @ ( * " 8 " @ ! " " " " $ ! ^ @ H ! @ # ! H " 6 ! S0 8 $ & P & " 0 & P " : F9F9F9F9DB
M0 " " 0 ! $ ! L " 1 " ; P5 ^ @ H ! @ % ! H " " (0 8 $ " & " 8 " P " " " B
M0 " " @ ! $ ! L " 1 " ; ! 045 ? @ ( * " 8 ! P < " " $ D & ! ! L ! @ ( ! L " " " "
M * T " " D 1 " ; D0 & P < % ? @ ( * " 8 " 0 < " " 5T & ! ! L ! @ * ! L ' S , S , S , S ,
M ! D " " D 1 " ; D0 & P D % 0 ( & " 8 " P = " $ " ! @ & " P " @ ! ^ @ H ! @ - " < "
M 4 ! 50 8 $ & P & " X & P ! F9F9F9F9F8 $ 0 " " 0 ! $ ! L " 1 " ; #05 ^ @ H ! P " " @
M " " 80 0 " $ @ " " $ + " * #4W - #D0 - D ) ! - E = ^ @ H ! P " " $ ( " " 80 ' X " " @
M " , & @ ! @ % ! @0 ; " < ! " ; , S , S , S , S # ! " " ) $0 " P ) $ ! \ # ! 7X " " @
M " 4 & @ " " A ! @0 < " < ! @ ? " " # ) " " * $0 " P ) $ ! \ % ! 15 ^ @ H
M ! P " ! P " " 00 8 $ & P " " @ & P " " " X0 " " 0 ! $ ! \ " 1 ? ! P5 ^ @ H

```


M!P')`!P`7!R0`8\$&P`'`H`&P`T,S,S[,Q0`""0!\$!\`"1`?"04!`@8`
M!P`+`!T`0(&`<`#`>`'X'"@`'`T`)P`!`&Y`!@0;`<`#@`;;,S,S,S,
MS"Q`'`')`\$0`P`)\$!\`-!7X""@`('`*`'`!Q`!`(+`@`'0`L`,`-D,T
M?@(*`@`'@!"`'`"\$!`^`@H`'`#`!H`'0!T0`8\$&P`('`0`&P`T,S,S,S,C
M0`""0!\$",`"1`C`P5^`@H`'`%`!H`'00`8\$`'`('`8`P`'`'`H
M0`""0!\$",`"1`C`!045?@(*`@`!P`<`'`\$`&!L`'`('!L`'`'`'
M*\$`'`'D`1`C`D0(P`<?@(*`@`'0`<`'P`D`&!L`'`*`!L`-#S,S,S.S
M+4`'`'D`1`C`D0(P`D`%`0(&`@`"P`='`\$`!@`('P`'@!^`@H`'`'-`<`
M`'`'0`8\$&P`('X`&P`'`'80`""0!\$",`"1`C`#05^`@H`"0`""@`
M`'`@0`0`#0`)'`\$`+'`%`#9\$0S8@?@(*`D`'@!"`'`#\#]`^`@H`"0`#`!H`
M`1`#0`8\$&P`)'`0`&P`!F9F9F9F880`""0!\$"<`"1`G`P5^`@H`"0`%`!H`
M`'80`8\$`'')`8`P`'`'80`""0!\$"<`"1`G`!045`0(&`D`!P`<
M`8\$&P`)'`@`&P`'`'0!\$"<`"1`G`!P5^`@H`"0`)'!P`>!P
M0`8\$&P`)'`H`&P`":F9F9F9D%0`""0!\$"<`"1`G`"04!`@8`"0`+`!T`0(&
M`D`#`>`"0`"0`)'`T`)P`!`"``\$`@D`"0`.'!L`'0`@?@(*`H`'`T`'
M(D`\$`@T`"0`!`#@`!0`R-EHU5WX""@`*`('OP`'`!`?@(*`H`P`W`'P
MA\$`&!L`"0`\$`#4`S<S,S,S,*D`'`D`1`K`D0*P`,%?@(*`H`!0`W`'`
M(\$`&!P`"0`&`#8`'`',`\$`'`H`1`K`D0*P`4%%7X""@`*`<`-P`'
M`")`!00;`H`'`'U`'`'`#)`'\$0*P`)\$"L`!0\$`!@`*`D`-P`&
M!!L`"0`*`#4`'`'D`1`K`D0*P`D`%`0(&`H`"P`X`\$`!@`*`
M`P`.'0`\$`@D`"0`-`#H`'0`@!`())`H`#@`U`\$`('\$`!@`+'`'1`!'@8`
M`P`!`\$0`'0(&`L`'@!%`\$`!@`+'`',1`!'@8`"P`\$`\$4`'0(&`L`!0!\$
M`\$`!@`+'`8`1@`\$`AL`"P`'`\$0`\$P`R+#,L."!N;W0@879A:6QA8FQE`0(&
M`L`'`!%`'0`&0`+'D`1P`1`#(L.2!N;W0@879A:6QA8FQE`0(&`L`"@!%
M`\$`!@`+'L`1`!'@8`"P`,\$4`!`('L`#0!`!4`,BPT+#@L.2!N;W0@
M879A:6QA8FQE`0(&`L`#@!%`\$`!@`,'`#P`!`@8`#`!'`'!'(1`P`
M`@`_`D`5\$]404P@,2TY`0(&`P`P`[`8\$'0`,`0`/`":F9F9F1E70`'
M`P`E`L`*P`0\$&1#,\$\$`!@`,`4`.P`&!T`#`&`#P`'`'6T`'L`
M)0+`"L`&!AD0S,P!`@8`#`'`#L`!@0=`P`'`'\`'`'X%-`'`+'4"
MP`K`'`@9\$`\$`'0(&`P`"0`]'`8\$'0`,`H`/`!G9F9F9J940`'P`E`L`*
MP`H*&1`!`\$`!@`,`L`.P`!`@8`#`',`#X`'0(&`P`#0`]'`8\$'0`,`X`
M/`#S,S,S`Q+0`'P`E`L`*P`X.&1`!`\$`!@`-`'`#P`!`@8`#0`!'`'
M!`(1`T`'@!`D`5\$]404P@,RTX`0(&`T`P`X`8\$'0`-`0`-@!F9F9F
M9N900`'P`E!,`)P`0\$&1`,`\$`!@`-`4`.'&!T`#0`&`#8`'`'`#`
M4T`'L`03`<`&!AD0#`'!`@8`#0`'`#@`!@0=`T`'V`'P\$Q`
M`'+`4\$P`G`'`@9\$`P`'0(&`T`"0`W`8\$'0`-`H`-@":F9F9F:E30`'
M`P`E!,`)P`H*&1`,`\$`!@`-`L`.'!`@8`#0`,`#D`'0(&`T`#0`W`8\$
M`0`-`X`-@":F9F9F9E(0`'P`E!,`)P`X.&1`,`\$`!@`.'`'`('!'@8`
M#@`!'`'`0(&`X`'@I`\$`!@`.'`'`('!'@8`#@`\$`"\$`'0(&`X`!0`@
M`\$`!@`.'`8`)'!`@8`#@`'`'`0(&`X`'A`\$`!@`.'`D`)'!`@8`
M#@`*`"\$`!`(>`X`"P`@`!8`56YI=&5D(\$5L96-T<F]N:6-S(\$-0+\$`!@`.
M`P`('0`\$`AX`#@`-`"8`%@!.97<@4V5N<V]R(\$-0<G!0<F%T:6]N`0(&`X`
M#@`A`\$`!@`/'`\$`('!'@8`#P`'`'\`'0(&`\`P`@`\$`!@`/'`0`('0`\$
M`A<`#P`%'`'`#P`!\$;VX@1VEE<RP@2S1'250!`@8`#P`&`"0`'0(&`\`'A
M`0`%0`/'`D`)'@`-`"0S,3(I.#<Q+3<T-3D!`@8`#P`*`"\$`!`'(3`'\`"P`@
M`L`3F5W87)K+`!.2BX!`@8`#P`,`\$`!`'(8`'\`#0`@`!`,`C`@0V]0<&5R
M(%-Q=6%R90\$`!@`/'`X`('!'@8`\$`'`'`0(&!'`'0`@`\$`!@`0`('`
M*0`!`@8`\$`#`'`'0(&!'`'A`0`%0`0`4`('`-`"0Y,#0I-#<U+3\$Y

```

M-3`!`@8`$``&`"0`0(&`!`!`P`@`$`!`@`0`@`(`0`!`@8`$``)`"8`0(&
M`!`!`"@`A`0`0`%`0`0`L`(``,`#(P,2TW-3$M,C4Y,0$`!`@`0`P`(`0`$`AH`
M$`-`-`-`$@!`97<@66]R:RP@3ED@,3`P,#,!`@8`$``.`"$`$`0(&`!`$```=
M`$`!`!`@1`$`(`!`!`@8`$0`"``"D`0(&`!`$`P`@`$`!`@1`0`(`0`$`A4`
M$0`%`"``#0!2="`R($0>``R-SDP`0(&`!`$`!`@`D`$`!`@1`<`(`!`!`@8`
M$0`(`"$`$`0(&`!`$`"0`F`$`!`@1`H`(`0`!`@8`$0`,`"$`!`(`6`!`$`#0`@
M`X`,2TX,#`M-C,S+34T-S<`!`@8`$0`.`"$`$`0(&`!`(```@`$`!`@2`$`
M(`!`!`@8`$@`"``"D`0(&`!`(`P`@`$`!`@2`0`(`0`$`AD`$@`%`"``$0!-
M96QR;W-E+"!&3`"S,C8V-@$`!`@2`8`))`!`!`@8`$@`"``"0(&`!`(`"``A
M`$`!`!`@2`D`))@`!`!`@8`$@`*`"$`!`(`7`!`(`"P`@`$`\`-#@R+30X,#D@1&]N
M;F$@`0(&`!`(`#`A`0`0`%`2`T`(`-`#(Q,BTU,CDM,#0V-B`!`!`@8`$@`.
M`"$`$`0(&`!`,```B`$`!`@3`$`(@`!`!`@8`$P`"``"L`0(&`!`,`P`B`$`
M!`@3`0`(`P`$`A8`$P`%`"(`#0!3:&EP<&EN9R`D-"XU`,`$`!`@3`8`))0`!
M`@8`$P`"``"(`0(&`!`,`"``C`$`!`@3`D`*`@`!`!`@8`$P`*`,`!`(`4`!`,`
M`P`B`P`.#`P+34R-BTQ,C<U`0(&`!`,`#`C`0`&`3`T`*`@`0`#(Q,BTU
M,CDM,#0X-B!F87@!`!`@8`$P`.`",`/0`*`````%!0H4/0?```^`@H`M@`````
M`````!T`#P`#`@`-`````0`"``"(`#0VK`"(`(`X/_____
4_____PH`"``"
`

```

end

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
 From: lstolz@tekelec.com (Lynn Stolz)
 Subject: Ray Moore's Book (Re: SX-62B Minus BF0)
 Message-ID: <9604041442.AA04512@london.oh.tekelec.com>

Don Merz said:

>Does Moore have his story straight on these?

Ray Moore's book is an excellent source, but it is not divinely inspired.

I have found a few errors of omission and commission regarding certain receivers that I have personal experience with. Examples are:

Drake 2-C: Only a very few early 2-C's used a 12BZ6 as the RF amp. Most will have the 6BZ6. I've seen/owned several since they came out, but never saw one with the 12BZ6. (As a novice/general/tech/extra in '67-70' as WN8UFM/WA8UFM I used the 2C/2NT pair... sn's 237 & 130). In Ray's defense, all of Drake's literature says that the receiver uses the 12BZ6.

Hammarlund HQ-150: I can't remember for sure, but either the q-mult or the audio driver is wrong. The HQ-150 Q-mult uses a 12AT7, and there is a 12AU7 in the audio chain. I'm at work and my book is at home :^.

Hallicrafters SX-117: A 14th tube, 6EA8, is used for the (optional)

crystal oscillator positions.

Drake R4-C: It had three versions of mixer tube configurations using various combinations of 6BE6's, 6HS6's and 6EJ7's.

Lynn, N8AJ

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: jcall@sirius.com (Jim Carrington)
Subject: Re: Ray Moore's Book (Re: SX-62B Minus BF0)
Message-ID: <199604041654.IAA05416@moon.sirius.com>

>Don Merz said:

>

>>Does Moore have his story straight on these?

>

>Ray Moore's book is an excellent source, but it is not divinely inspired.
snip

I just happened to have a old 1949 Radio Amateurs Handbook handy (should be at work now but I,m not) and looked at the Hallicrafters add for the SX-62 , (which I guess may have been introduced about this time since they say its the "new SWL version of the famous SX-42"). It mentions having a CW position on the mode switch and in the tube complement lists a 7A4 as the BF0 tube . By the way , the listed price in 1949 was only \$269.50.

73

Jim Carrington

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: rsolomon@cctds.textron.com
Subject: Read it & Weep !!
Message-ID: <9603048286.AA828649936@cctds.textron.com>

Gleaned from the Packetcluster last night ,posted at 0400Z, 03 Apr
Hallicrafters HT-32A Transmitter
Hallicrafters HT-33A Amplifier
Collins 75A-4
2 Boxes of misc tubes, manuals
Hallicrafter Speaker
Hallicrafter S-108 RCVR

Estimated weight 350#, offered at \$1 PER POUND !!!

Needless to say it went rather quickly.
Guess I need to check the cluster more often.
73, Dick, W1KSZ

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: John Wieder <jwieder@gunnison.com>
Subject: subscription
Message-ID: <199604050114.SAA20234@gunnison.com>

Please send info about the boatanchor group including subscription info. TNX
73 John WA0JYJ

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: don merz <71333.144@compuserve.com>
Subject: SX-62B BFO--Just Say Yes!
Message-ID: <960404182534_71333.144_DHB33-9@CompuServe.COM>

Well, silly me, of course the SX-62B has a BFO--it's on the "CW"
position of the "RECEPTION" switch. I never noticed it because this one
doesn't work! Ahh...another project--this ought to be quick.

Thanks to all for the help.
Anyone have an SX-62B manual to sell?

Thanks.
Don, N3RHT
71333.144@compuserve.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: don merz <71333.144@compuserve.com>
Subject: SX-62B Minus BFO
Message-ID: <960404030612_71333.144_DHB33-5@CompuServe.COM>

The Moore book lists the SX-62 and SX-62A as both having a BFO. There
is no detail in my 2nd ed Moore book on the SX-62B so one might assume
that there were no substantial changes to the radio. But my SX-62B has
no BFO. Does Moore have his story straight on these? How could the radio
have gone from \$350 in 1963 for an "A" model with a BFO to \$525 in
1965 for a "B" model without one? What have I missed?

73, Don

--

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: jcall@sirius.com (Jim Carrington)
Subject: Re: SX-62B Minus BFO
Message-ID: <199604040401.UAA10387@moon.sirius.com>

>
>>The Moore book lists the SX-62 and SX-62A as both having a BFO. There
>>is no detail in my 2nd ed Moore book on the SX-62B so one might assume
>>that there were no substantial changes to the radio. But my SX-62B has
>>no BFO. Does Moore have his story straight on these? How could the radio
>>have gone from \$350 in 1963 for an "A" model with a BFO to \$525 in
>>1965 for a "B" model without one? What have I missed?
>>
>>73, Don
>
>Don,
>From what I've seen with Hallicrafters they sometimes removed things from
later models to save costs. Example 1) I bought an S-38 (1946) which has a
BFO pitch control and 6 tubes. A friend of mine has the S-38C (1952) which
looks the same but has only 5 tubes and a BFO switch but no pitch. Example
2) I have an S-77 which is the AC/DC version of the S-40B. Last weekend I
came across an S-40A in good condition for only \$50 and picked it up
thinking that I would keep the better cosmetically of the 2. When I compared
them the earlier S-40A had a flywheel on the bandspread, larger IF
transformers, and copper plated black painted steel front panel extrusions
for the main and bandspread dials , allowing them to protrude almost 1/4
inch from the front face of the radio. The later S-77 had none of these. For
the dial protrusion, Hallicrafters made the front face as one piece and
stamped it so the dial protruded 1/8. Definately a cheaper radio for them to
make.
>
>
>
>
>
>
73s
Jim Carrington

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: afpgreg@state.me.us (Paul V. Gregory)
Subject: Take What's Behind Door #1?
Message-ID: <199604041144.GAA25476@gatekeeper.ddp.state.me.us>

Ahoy,

I donno whether to be pleased or not. I have been "awarded" a complete, rack mount Collin 51J-4 from a government auction. It was used by FCC at its Belfast, Maine monitor station. Price \$225 FOB Belfast, about a 20-miles from my QTH.

Now here's the clincher: I've never seen it! The station engineer (a rather sleepy sounding fellow--hardly effuse with words let alone with a vivid description of the radio) said it worked when last used four or five years ago.

Am I asking for trouble? What this situation (dealing with government auction, how FCC treats their radios and 51J-4's in general) rate on a scale of 1 (utter fool) to 10 (savviest of BA aficionados)? I've never gambled before!

--Paul/KB1AOC

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Steve Ellington <n4lq@iglou.com>
Subject: Re: Take What's Behind Door #1?
Message-ID: <Pine.GS0.3.92.960404164509.13677B-1000000@iglou2>

Good night! A 51J for that price? Take your check book and get over there before they change their minds!

Steve Ellington N4LQ@IGLOU.COM Louisville, Ky

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Michael.J.Knudsen@att.com
Subject: Re: The ultimate R390 accessory/sync detector
Message-ID: <9604031759.AA05549@bock.ih.att.com>

Would the GE YRS-1 have used the Costas loop? I remember that as a type of synch detector that did not require a carrier at all, but did require two sidebands. Moore's shows a prototype GE military rx based on it, as "the only commercial direct-conversion rx" -- well, with toobs anyway. It was indeed GE's attempt to push DSB instead of SSB.

For SWL and ham AM use, the Costas loop is both good and bad. It will survive a selective fading hit right thru the carrier (that turn on the Carrier Fade Alarm light on a CV-157!), but if one sideband fades you're in trouble.

Maybe a whole sideband wouldn't fade out, but what if you deliberately filter one out to get rid of QRM on that side?

So maybe the Ultimate accessory should have a choice of carrier or sideband (Costas) based synch detection. Might end up with more knobs and lights than a CV-157. --mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: John Kolb <jlkolb@cts.com>
Subject: Re: The ultimate R390 accessory/synch detector
Message-ID: <Pine.SCO.3.91.960404081459.10101A-100000@sd.cts.com>

On Wed, 3 Apr 1996 Michael.J.Knudsen@att.com wrote:

> Would the GE YRS-1 have used the Costas loop? I remember
> that as a type of synch detector that did not require a carrier at all,
> but did require two sidebands. Moore's shows a prototype GE military
> rx based on it, as "the only commercial direct-conversion rx" -- well,
> with toobs anyway. It was indeed GE's attempt to push DSB instead of SSB.

I'm sure the YRS-1 would have used the Costas loop. I once had a YRS-1, but don't think I ever saw a manual for it. There was a Synchronous Detector article in the June 57 CQ mag by John Webb, a GE employee, as was Costas. I suspect that article looks a lot like the YRS-1. Copies available upon request (up to the 'continued on page 117'), as well as copies of the '67 synch det. article in 73 mag by Nagle, and the IRE article by Costas. Anyone have any other synch detector articles they'll swap me?

I once had a FRR-48 also, one of only 3 that were made, I was told. Still have the main tuning knob from it.

> For SWL and ham AM use, the Costas loop is both good and bad.
> It will survive a selective fading hit right thru the carrier
> (that turn on the Carrier Fade Alarm light on a CV-157!),
> but if one sideband fades you're in trouble.
> Maybe a whole sideband wouldn't fade out, but what if you deliberately
> filter one out to get rid of QRM on that side?

Well, clearly, the Costas loop wouldn't work if you don't start with both sidebands.

If selective fading reduces the amplitude of the carrier, the detection process (standard diode detector) goes to pot real fast- detection continues using whichever frequency is strongest at that instant as the carrier. If fading knocks out one sideband in a Costas loop, the oscillator loses the correction voltage to keep it locked to zero degrees phase relative to the transmitted (or suppressed)

carrier, but the balanced mixers still have a full strength carrier near the correct freq. You would get deep nulls in output as the phase moved through 90 degrees, but most of the time, should sound like SSB not quite on freq. The loop time constants would determine how long the oscillator stayed at the previous freq before being pulled off. I don't know how much of one sideband selective fading would have to distort before a Costas loop would lose lock, but it should surely happen a lot less often than selective fading messes up a standard AM diode detector.

I've always wondered how well a sync detector could reject the stronger signal on the channel, the one it's locked to, to copy the weaker signal.

> So maybe the Ultimate accessory should have a choice of carrier or
> sideband (Costas) based synch detection. Might end up with more knobs
> and lights than a CV-157. --mike k aa9rg

Only an extra position on the mode switch, and a pot to supply the tuning voltage for the oscillator (BFO) instead of using the correction voltage from the loop.

John Kolb KK6IL jlkolb@cts.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Michael.J.Knudsen@att.com
Subject: Re: The ultimate R390 accessory/synch detector
Message-ID: <9604041722.AA05839@bock.ih.att.com>

Good post by John. For articles, I have the 1957 (?) edition of Radio Engineers Handbook, which devotes a whole page to "synchronous detection." It describes not the Sony carrier-based simpler scheme, but rather the Costas Loop, and states that this will work on either AM or DSB.

I agree with John that the Costas synch detector should be very robust on AM SWL work, [provided the QRM on one side doesn't get too serious. But since Costas uses *all* frequencies in each sideband, not only can you tolerate a serious selective fading hit on one (or both) sides (there will always be something left of each sideband), but you could filter out QRM on one side (with a notch/slot filter, or just slide the signal over into the "wall" of the mechanical filter bandpass), and still maintain lock as long as some bass remained on that side.

Costas multiplies the two sidebands together to get the sign of the correction voltage -- I understood it but the book is at home.

BTW any synch detector should include an integrator in the control voltage feedback path, to simulate motor-driven AFC as in the CV-157. That makes your BFO stand still when your phase detector loses output due to fading. You also need a fade detector to lockout the phase detector.

Hmmm, now I really appreciate that CV-157...73, mike k aa9rg

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: "basalop" <basalop@eskimo.com>
Subject: Transformer Question
Message-ID: <199604050003.QAA19482@mail.eskimo.com>

Hello Toob Dudes,

I have a project all ready to be wrapped up that uses a Thorardson Type 6411 HV transformer. It has a choice of 1555/1555 v or 1260/1260 v output. You select the proper pair for the 110 input. There are three marked 1, 2 and 3. Which one would be the common one? If I knew that the selection would be rather easy. I will be using a autotransformer on the input side so I can adjust the supply to 1000 volts or so.

73 Jim K7SLI (basalop@eskimo.com)

I have a project all ready to wrap up.

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: wb6zwc@ns.net
Subject: tubes
Message-ID: <2.2.16.19960403191536.0f2724c8@mail-1.ns.net>

Let's hear it for United Electronics in Newark, NJ. They have located my 575'A. These tubes are to be tested before I receive them.

Donna was very helpful in locating them. Apparently she has many resources for vacuum products.

She can be reached at 201-751-2591.

Richard wb6zwc@ns.net

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: "F r6fqHo!ht" <75121.100@compuserve.com>
Subject: Tubes? correction
Message-ID: <960404200537_75121.100_FHI79-9@CompuServe.COM>

My last posting about tubes for sale should have read "boxes of 5 minimum each"
not just "boxes of 5 "
The prices in the second column are for each tube.

Regards from Honolulu,
Raymond J. Cote

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: sinned@VNET.IBM.COM
Subject: TV hash + QRN
Message-ID: <199604042154.PAA08025@uro.theporch.com>

I was completely 'hashed-off' of 80m until I installed a grounded counterpoise at the QTH. It is a just a wire(#14) lying on the ground outside about 60-70 ft. long. It is connected in it's center to my 'drived-rod' ground. I'm still amazed at how much that reduced my receive noise/hash level. I also experimented with a noise antenna and that helped alot too, but setteled on the counterpoise 'cuz it also helped reduce SWR on lower bands. I got the info from the Frank Jones 'california' handbook (1935 i think) and I'm convinced that 'ol Frank knew all there was to know about HF antennas by 1934!

Dennis
KC5EPZ

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Bill Strangfeld <bstrang@iac.net>
Subject: UTC PVM-1 info wanted
Message-ID: <Pine.SUN.3.91.960404091329.7971A-100000@wabash.iac.net>

Does anyone have specs on a United Transformer Co PVM-1? Thanks!

Bill Strangfeld
bstrang@iac.net

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Nina West <ninaw@u.washington.edu>
Subject: Re: Variac Marked "350 cycles min"
Message-ID: <Pine.A32.3.92a.960403160442.100377A-100000@homer19.u.washington.edu>

Thanks to everybody for the technical theory behind transformers and power supply frequencies. I was able to find the vendor catalog for this unit and they advise that you can run it on 60 cycle power up to 60 volts. If I find a center-tapped isolation transformer I am back in business, otherwise I have a mil-spec electric train transformer.

On Sat, 30 Mar 1996, Fred Powell wrote

> Picked up what I thought was a bargain variac from Boeing Surplus today.
> It was in a small box marked test aid and is smaller than most I have
> seen and is marked:
>
> 120V-6A-350 cycles min
> VARIAC type M5
>
> Is this unit for use on 400 cycles aircraft power? What will happen when
> I try it on 60 cycle power? I would appreciate some instruction on this
> as well as general info about how inductors, transformers, etc, are set up
> for different power supply frequencies. I have heard that the 400
> cycle aircraft power results in lighter equipment. And what is this I
> hear about 25 cycle power in the Panama Canal Zone? Would transformers
> for this power be twice as heavy as for 50 or 60 cycle power?
> Thanks for your help
>
> Fred Powell
> c/o
> ninaw@u.washington.edu
>
>
>

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: ZI076@ccmail.ceco.com
Subject: Victoreen Company
Message-ID: <9603048286.AA828658266@ccmail.ceco.com>

Noted with some interest all the discussions on Victoreen.

I am in the commercial nuclear power instrumentation business;
and Victoreen still makes radiation monitoring instrumentation used
throughout the industry. If you need any further info, I can look up

their current address/phone in the vendor catalogues we maintain here at the Zion Nuclear Plant.

73s,

Chuck AI30

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: "Darrel L. Nichols" <NICHOD@delphi.com>
Subject: Viking 500 on 160M
Message-ID: <01I35NOCMKAG98B1I0@delphi.com>

Has anyone done or know of a 160M mod for the 500? This thing looks like the perfect BA TX and am considering hot pursuit of one, but won't be much good unless can put it on Top Band

I've heard several other "non 160 rigs" on the band lately.

end

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: TEK0CH@aol.com
Subject: Wanted: Heathkit HW-12 mobile mike and speaker
Message-ID: <960403235831_263654640@emout06.mail.aol.com>

I am looking for the white plastic hand mic. and green metal speaker that matched the Heathkit HW-12. I was lucky enough to find a near mint HW-12 and powersupply via Boatanchors and would like to complete the set.

Tom Koch - W4UOC
8170 Habersham Waters Road
Dunwoody, GA 30350
TEK0CH@AOL.COM

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: Terry Neal <tmneal@netcom.com>
Subject: Wanted: HRO 60 "F" coil set
Message-ID: <2.2.16.19960403153956.26afeb58@10.0.2.2>

Wanted: HRO 60 "F" coil drawer. I think the F set works on the HRO50 as well.

Thanks Terry aa6tn

tmneal@netcom.com
voice phone 714-546-9602

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: TEK0CH@aol.com
Subject: Wanted: Manual for Central Electronics 10-B
Message-ID: <960404000045_263656278@mail04>

I have restored a Central electronics 10-B and am looking for a copy of a manual for that rig.

Tom Koch - W4UOC
8170 habersham Waters Road
Dunwoody, GA 30350
tekoch@aol.com

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: "William L. Fuqua III" <wlfuqu00@service1.uky.edu>
Subject: What are these tubes?
Message-ID: <199604041331.IAA08935@service1.cc.uky.edu>

Just picked up a bunch of tubes (pulls). But have trouble getting specs.

The first is a Motorola 83382D02 conduction cooled tube used in older mobile rigs.
They look like 4cx250's with a different heatsink.

The second is a 8737/5894B dual tetrode. I can find class C specs but that is all.

If someone could e-mail some spec info I could figure out what to do with these tubes.

TNX
ES
73
Bill ko4ww

William L. Fuqua III P.E. E-mail WLFUQU00@POP.UKY.EDU Phone (606) 257-4155
Department of Physics and Astronomy CP-177 Chem. Phys. Bldg.
University of Kentucky , Lexington, Ky 40506-0055

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: Paul_Bocci-CPB007@email.mot.com
Subject: RE: What are these tubes?
Message-ID: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>

"Just picked up a bunch of tubes (pulls). But have trouble getting specs.

The first is a Motorola 83382D02 conduction cooled tube used in older mobile rigs.

They look like 4cx250's with a different heatsink."

Hi Bill,

I can't help on the other one but the Motorola tube you have is an 8560A. they are made by Eimac among others and are very similar to the 4CX250.

SPECS:

Plate Dissipation - 200W
Screen dissipation - 12W
Grid Dissipation - 2W
Freq for Max ratings - 500 Mc
Cooling - Conduction
Cathode - Oxide Coated Unipotential
Voltage - 6.3V
Current - 2.6 Amperes
Capacitance - (Gnd Cath Connection)
Input - 16.5 pF
Output - 4.6 pF
Feedthrough - 0.04 pF
Amplification Factor (g1-g2) - 5
Recommended Air System Socket - SK660 Series
Recommended BeO Thermal Link - SK-1920
Maximum Seal & Anode Core Temperature - 250C
Base
Pin 1 - Screen Grid
Pin 2 - Cathode
Pin 3 - Heater
Pin 4 - Cathode
Pin 5 - do not use
Pin 6 - Cathode
Pin 7 - Heater
Pin 8 - Cathode
Center Pin - Control Grid

If you happen to have one of the thermal links (the insulating block that goes between the anode and the heat sink) with the tube, handle it with care -- BeO is dangerous if powder is inhaled.

73

Paul, K9NO

CBP007@email.mot.com

From boatanchors@theporch.com Thu Apr 4 15:24:23 1996
From: berg stephen erik <z931086@corn.cso.niu.edu>
Subject: RE: What are these tubes?
Message-ID: <Pine.3.89.9604041343.B8385-0100000@corn.cso.niu.edu>

I have used a Motorola 5894 equivalent tube on 6 SSB with good results.
I put it in my P&H transverter in lieu of an 8117.

73,

Steve WA9JML

From boatanchors@theporch.com Thu Apr 4 08:06:26 1996
From: aa4rm%amos.UUCP@mathcs.emory.edu (Marty)
Subject: Whyza plate modulator need 50% RF pwr. input as output??
Message-ID: <9604040245.AA03627@amos.YP.mystnite>

We've been tramping around the linear vs. plate modulation maypole now for five days. There's been some good poop on the low modulation percentage ceiling for efficiency modulation, blowing off power in linears, guesses about Terman, Dougherty, and Woodward amp. design.

Hey this was good, I learned a newie about the French twin-PM system to simulate AM!.

But the dialogue has largely been ham magazine boolah boolah. Our 'ham stuff' now and for ages has been written for the populist LCD. Equipment write-ups lean toward panache, human factors, 'nice features,' and experience / impression.

I'd always wondered something very basic & that was why it takes half the carrier input as modulator output for 100% AM modulation.

Now rather than pole the reflector I sat down with a scratch pad and in 10 minutes discovered WHY 50%.

Doing the analysis of power to produce 100% modulation requires integral calculus. This is now something most college freshmen have in inventory.

If you've had the stuff, proceeding through the math is real direct.

You predicate that on an audio peak the RF amp. will have 2X the voltage w/o modulation and on an audio 'valley' (anti-node) there will be no RF amp. voltage. The equation for instantaneous power at time 't' then becomes

$$P = \frac{[V [1 + \sin(2 \text{ Pi aud.-freq } t)] \times \sin(2 \text{ Pi RF-freq. } t)]^2}{\text{Tank-impedance}}$$

ANYBODY AWAKE?

Ok, one. Without more math and hygiene, one can see that when the '1 + sin' audio term is 2 and the RF happens also to be at a peak, the peak is 4X the unmodulated peak... the 'squared consideration' does that... at that instant we just have old V-squared/R.

So the peak input for a 100% modulated kw is 4kw. I think our good FCC regulators gave us 2kw PEP input for that reason since SSB was using half the sideband count of AM... and 1500w PEP out is half of 4kw at 75% efficiency.

This too is never discussed in an ARRL book or anywhere else. I've never seen a description of where it arose & can only guess this is right.

But 2kw PEP wasn't such a great idea because I'll demonstrate that a 100% modulated AM kw only has 250w USB and another 250w LSB info content. We give up almost a factor of 8 in the 'talk power' department.

The only thing we AM users have is bass. Filter systems have to give the carrier a wide berth so the 300 hz lower limit isn't just for 'communications punch,' it's out of circuit necessity.

I like bass.

HEY BUDDY, ONE MORE YAWN & I QUIT

To calculate average power, integrate the power equation with respect to time (t) and divide by the total time of integration.

Pick an RF freq. that's, say an even multiple of the AF. Let's consider AF = 2 kcs, RF = 2 mcs. Then integrate the equation above over a full AF cycle. You use trig identities to change all the squared sines/cosines to multi-angle

things that can be integrated & here's what falls out.

$$\text{avg. power} = P_{\text{carrier}} + .25 P_{\text{LSB}} + .25 P_{\text{USB}}$$

That's where the 'half the power' modulator capacity arises.

If anyone would like, I'd send a copy of the math / trig-identity developement thru the mail. Or if there's any real interest it could be left as a .gif file on a nearby anonymous ftp* site...

Hope this was useful,

Marty

* actually any writable ftp site would do / ever thotta that? Bet lotza hackers have.

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Mikhael Brown <mikhael@hpcmmp13.sj.hp.com>
Subject: WTB BC-610 Accessories
Message-ID: <199604050137.AA017158254@hpcmmp13.sj.hp.com>

Hello everyone,

I am looking for the junction box # JB-70-A, the crystal holder box BX-34-B and crystals for a BC-610. If anyone has any of the above they would like to part with, let me know.

73

Mike, N6WIG

mikhael@hpcmmp13.sj.hp.com

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996

From: pbock@melpar.esys.com (Paul H. Bock)
Subject: WTB: BC-348
Message-ID: <9604042216.AA01047@syseng1.se.melpar.esys.com>

Looking for a BC-348 in decent condition, no FP holes or mods (meter, extra pots, etc.) and no circuit mods, serious defects or missing parts. AC supply replacement for dynamotor OK if either (a) done neatly in the dynamotor compartment, or (b) built as an outboard supply.

Have a couple of "partial trade" items (mint Navy flameproof key, Navy headset in GC) but otherwise will have to go cash.

Contact pbock@melpar.esys.com if you know of anything.

73,

Paul, K4MSG

From boatanchors@theporch.com Thu Apr 4 21:11:34 1996
From: Wayne Hoffman <wb6wlr@wdc.net>
Subject: WTB: Lafayette HA-350 manual
Message-ID: <199604050256.SAA19781@n1.wdc.net>

I need (REALLY need!!) the manual, or at least a schematic, for the Lafayette HA-350 receiver. Any help, from copies to leads where I can find one, will be greatly appreciated. All costs covered, of course...

- 73 -

Wayne Hoffman
ARS WB6WLR (Grid DM13at)
Internet wb6wlr@wdc.net
PacBell (714) 254-4182